

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**NETWORK PASSWORD RESET SYSTEM**

5

FIELD OF THE INVENTION

The present invention relates generally to information processing systems and more particularly to a methodology and implementation for resetting passwords in distributed network systems.

15 BACKGROUND OF THE INVENTION

The continually increasing use and development of networks, including the Internet as well as local area networks (LANs), has created a massive communication system in which any one computer machine or system is able to communicate with almost any other machine in any country of the world. The term "machine" as used herein refers to computer systems which may be operating as user terminals or network servers. The evolution of networks and computer systems has also created an environment in which many different operating systems and computer machines exist and each machine needs to be able to have access to other machines which in many cases have different operating systems. Moreover, each different operating system will have application programs created to work specifically with that particular operating system. Programs written to operate with one operating

system may not have corresponding programs written to operate on different operating systems.

Through the use of inter-connected networked systems, users
5 on one system are able to have access to and utilize resources which are available on machines located elsewhere in the network. Such systems however, require relatively intricate security routines to insure that only authorized users have access to available network resources. The
10 security and access functions are provided through the use of special access programs, including web-based password reset tools, to manage user ID and password processing and access to network resources at local and remote network sites.

15

However, current web-based password reset tools can only be installed on certain operating systems. For example, an existing version of "HelpNow! EasyAccess 2.0™" (HNEA) can only be installed on a server running Microsoft Windows NT
20 4.0™, and the server clients are only clients running Windows 95™, Windows 98™, Windows NT™ and Windows 2000™ operating systems. HNEA operates as web-based password reset tool to reset the passwords of user IDs that are created in Windows NT and Windows 2000, HPUX™, AIX™, Sun Solaris™, MVS™
25 and Novell Netware™ systems. Even though the end user must have a user ID to log on to the HNEA application, the user ID of each networking environment already exists independently of the HNEA application. Only the user ID of the HNEA application is created from HNEA. The other user
30 IDs are created in their own respective environments. For

00000000000000000000000000000000

example, the user ID of an AIX environment must be created on AIX, not HNEA.

Thus, there is a need for an improved web based password
5 reset tool that is capable of resetting passwords for user
IDs created in OS/2 systems.

SUMMARY OF THE INVENTION

10

A method and implementing system are provided in which, in an exemplary embodiment, a web based password reset tool includes means for resetting passwords for OS/2 user IDs. In the illustrated example, an OS/2 environment is contacted
15 using TCP/IP (Transport Control Protocol) over NetBIOS (Network Basic Input Output System). NetBIOS packets are passed through routers into the NetBIOS network. The user ID and new passwords are issued and passed to the OS/2 server to be set. After the OS/2 server sets the password, the new
20 password will be sent back to the password reset tool for access and/or display to the user requesting the new password.

25 **BRIEF DESCRIPTION OF THE DRAWINGS**

A better understanding of the present invention can be obtained when the following detailed description of a preferred embodiment is considered in conjunction with the
30 following drawings, in which:

Figure 1 is an illustration of an exemplary network system;

Figure 2 is a schematic diagram of an exemplary computer system; and

5

Figure 3 is a flowchart illustrating an exemplary methodology implemented in one embodiment of the present invention;

10

DETAILED DESCRIPTION

The various methods discussed herein may be implemented within an exemplary distributed information processing system as illustrated in Figure 1. As shown, an exemplary information processing system includes first, second and third computer machines 1, 3 and 5, which are connected together in a first network configuration 6 and coupled to a network server 7. The network server 7 is, in turn, connected through a connection network 9, to one or more remote computer systems 11 and 13. Computer systems 11 and 13 may, for example, be servers at remote network sites and the connection network 9 may be the Internet. In the example, the server 13 is an OS/2 system and is connected to OS/2 client or user terminals 15, 17 and 19. In the illustrated example, server 7 is operating a Windows operating system and client or user terminals 1, 3 and 5 are also running Windows systems.

30 Referring to Figure 2, there is shown a pictorial representation of an exemplary server computer system or workstation having a central processing unit (CPU) 40 such

as a conventional microprocessor, and a number of other units interconnected via a system bus 42. The exemplary workstation shown in Figure 2 further includes a Random Access Memory (RAM) 44, a Read-Only Memory (ROM) 46, an 5 input/output (I/O) adapter 48 for connecting peripheral devices such as storage unit 43 and one or more media devices 56 (such as floppy disks and CDs) to the bus 42. A user interface adapter 52 is shown connecting a keyboard 47, a mouse 53 and an audio system 54 (which may include 10 speakers and microphones) to the bus 42. Other devices may also be connected to the bus 42 through the user interface adapter 52. A communications adapter 45 is shown in the example connecting the bus 42 to one or more networks, and a display adapter 51 connects a display device 50 to the main 15 bus 42. The computer software embodiment of the present invention may be included as software installed on one of the workstations within the distributed environment illustrated. One skilled in the art will appreciate that the procedures associated with the present invention may be in 20 the form of a computer program product on a computer readable medium, which may be temporarily or permanently loaded on the illustrated workstation from media devices 56 such as CD or floppy diskettes, and also from storage devices such as hard drive 43, and executed from RAM memory 25 44.

In Figure 3, there is shown a flowchart illustrating an exemplary embodiment of the methodology of the present invention. In the example, HNEA is installed on the Windows 30 server 7 as shown in Figure 1. Code is included in HNEA to add the capability for HNEA to be able to reset the password of an OS/2 user ID. This is accomplished by creating a file

that will contact the server 13 of the OS/2 environment. To contact the OS/2 environment 301, when it is desired to reset the password of an OS/2 user ID 303, the OS/2 server 13 is contacted using TCP/IP over NetBIOS 305. This will 5 allow using TCP/IP to pass NetBIOS packets through routers (not shown) into the NetBIOS network 307. The packets contain the administrative ID and password of the OS/2 environment and the user ID and the new password of that user ID. The administrative ID and password are necessary to 10 contact the server with privileges that allow the administrative ID to reset passwords of other users of the OS/2 network. The user ID and new password are then issued and passed to the OS/2 server 13 to be set 309. The new user ID and new password are then set 311 and after being set 15 313, the password is then sent back 315 to the HNEA application on Windows server 7 for client access 315 and the process ends 317. The new password is then displayed through an email message or through the user screen display.

20 The method and apparatus of the present invention has been described in connection with a preferred embodiment as disclosed herein. The disclosed methodology may be implemented in many different ways in order to accomplish the desired results as herein illustrated. Although an 25 embodiment of the present invention has been shown and described in detail herein, along with certain variants thereof, many other varied embodiments that incorporate the teachings of the invention may be easily constructed by those skilled in the art, and even included or integrated 30 into a processor or CPU or other larger system integrated circuit or chip. The disclosed methodology may be implemented partially or totally in program code stored on

one of many possible media carriers, or other memory device, from which it may be accessed and executed to achieve the beneficial results as described herein. Accordingly, the present invention is not intended to be limited to the specific form set forth herein, but on the contrary, it is intended to cover such alternatives, modifications, and equivalents, as can be reasonably included within the spirit and scope of the invention.

0926012-412300